Geometry Standards

(These are subject to change.)

Bold Standards are ones that you will see multiple times.

**G1.1 Be able to use and apply fundamental vocabulary in geometry**

**G1.2 Use correct geometrical notation when representing key geometrical terms**

G11.1 Solve problems involving the area of triangles, quadrilaterals, circles, and regular polygons

G11.2 Solve problems involving irregular/composite figures

G12.1 Be able to find the surface area of polyhedron such as prisms and pyramids using nets

G12.2 Be able to find the surface area of other solids such as cylinders, cones and spheres

G12.3 Be able to find the volume of solids

G12.4 Apply and describe how SA and volume are used in optimization

G1.3 Use the distance and midpoint formula when working with segments.

**G1.4 Classify angles and angle pairs**

G2.1 Apply the basic axioms, theorems, and the reasonings behind proof to various statements

**G2.2 Write proofs involving algebra, lines, segments, and angles**

G3.1 Write equations of parallel and perpendicular lines

G3.2 Apply equations to create unique artwork

G4.1 Apply properties of triangles to find angle and side measures

G4.2 Use definitions, postulates, and theorems to state when triangles are congruent

G4.3 Use congruence for triangles to prove relationships in geometric figures.

G5.1 Be able to prove and apply the triangle Midsegment Theorem

G5.2 Be able to apply properties of triangle segments

G6.1 Be able to apply and use ratios and proportions

G6.2 Use the triangle similarity relationships to solve problems

G6.3 Apply similarity properties to fractals

G7.1 Be able to prove and apply the Pythagorean Theorem

G7.2 Be able to find unknown sides of right triangles using similarity or special right triangles

G7.3 Be able to find unknown sides or angles of right triangles using trigonometry

G8.1 Prove theorems about parallelograms and use coordinates to prove a shape is a parallelogram

G8.2 Apply angle sum formulas to polygons

G8.3 State and apply the properties of special quadrilaterals

G9.1 Transform a given figure

G9.2 Describe the symmetry, congruence, or similarity in a transformed figure

G10.1 Identify and apply segment and angle relationships in circles

G10.2 Identify and apply sector area and arc length in circles

G10.3 Use and apply equations of circles and completing the square